

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference SCB/60515001	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/GB 03/04078	International filing date (day/month/year) 23/09/2003	(Earliest) Priority Date (day/month/year) 23/09/2002
Applicant GW PHARMA LIMITED		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☒ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

METHODS OF PURIFYING CANNABINOID FROM PLANT MATERIAL

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/04078

CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07D311/80 A61K31/352 A61P29/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BEILSTEIN Data, CHEM ABS Data, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 365 416 B1 (ELSOHLY MAHMOUD A ET AL) 2 April 2002 (2002-04-02) cited in the application claim 1; examples 1-11 -----	1-54,91
X	US 2002/086438 A1 (ELSOHLY MAHMOUD A ET AL) 4 July 2002 (2002-07-04) claim 1; examples 13-26 ----- -/--	1-54,91

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

27 April 2004

Date of mailing of the international search report

25. 06. 2004

Name and mailing address of the ISA

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Seelmann, I

INTERNATIONAL SEARCH REPORT

International Application No

CT/GB 03/04078

(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GAONI Y ET AL: "THE ISOLATION AND STRUCTURE OF 1-TETRAHYDROCANNABINOL AND OTHER NEUTRAL CANNABINOIDS FROM HASHISH" JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC, US, vol. 93, 1971, pages 217-224, XP001095011 ISSN: 0002-7863 compounds Va and VI page 223, column 1, line 10 - line 35	1-54, 91
X,P	WO 03/064407 A (GOODWIN NEIL JOHN ; MCHATTIE DEREK (GB); ARCHER NICOLAS JAMES (GB); GR) 7 August 2003 (2003-08-07) page 18, line 24 - line 27; example 4	48-54
X,P	WO 03/063847 A (GW PHARMA LTD ; WHITTLE BRIAN (GB); JAVID FARIDEH AFSHIN (GB)) 7 August 2003 (2003-08-07) page 28, line 17 - line 27	35-47
X	DATABASE BIOSIS 'Online! BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US; 1992, LEHMANN T ET AL: "A NEW CHROMATOGRAPHIC METHOD FOR THE ISOLATION OF LEVO-DELTA-9-TRANS TETRAHYDROCANNABINOLIC ACID A" XP002278232 Database accession no. PREV199294066780 abstract & PHYTOCHEMICAL ANALYSIS, vol. 3, no. 2, 1992, pages 88-90, ISSN: 0958-0344	28-34
X	DATABASE BIOSIS 'Online! BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US; 1973, PARIS M R ET AL: "ISOLATION OF 2 CONSTITUENTS CANNABIDIOLIC-ACID AND TETRA HYDRO CANNABINOLIC-ACID FROM CANNABIS-SATIVA BY PREPARATIVE THIN LAYER CHROMATOGRAPHY" XP002278233 Database accession no. PREV197410013566 abstract & ANNALES PHARMACEUTIQUES FRANCAISES, vol. 31, no. 3, 1973, pages 186-188, ISSN: 0003-4509	35-47

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
1-54, 91
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-27 and 91

a method of obtaining purified cannabinoids

2. claims: 28-34

delta-9-tetrahydrocannabinolic acid (THCA)

3. claims: 35-47

cannabidiolic acid (CBDA)

4. claims: 48-54

delta-9-tetrahydrocannabinol (THC)

5. claims: 55-62

delta-9-tetrahydrocannabivarin (THCV)

6. claims: 63-77

cannabigerol (CBG)

7. claims: 78-90

cannabichromene(CBC)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

T/GB 03/04078

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6365416	B1	02-04-2002	AU 763700 B2	31-07-2003
			AU 1234800 A	15-05-2000
			CA 2348028 A1	04-05-2000
			EP 1133688 A1	19-09-2001
			JP 2002528718 T	03-09-2002
			US 2002086438 A1	04-07-2002
			WO 0025127 A1	04-05-2000
			US 2002039795 A1	04-04-2002
			ZA 200103330 A	30-01-2002
US 2002086438	A1	04-07-2002	US 6365416 B1	02-04-2002
			WO 03061563 A2	31-07-2003
			AU 763700 B2	31-07-2003
			AU 1234800 A	15-05-2000
			CA 2348028 A1	04-05-2000
			EP 1133688 A1	19-09-2001
			JP 2002528718 T	03-09-2002
			WO 0025127 A1	04-05-2000
			US 2002039795 A1	04-04-2002
			ZA 200103330 A	30-01-2002
WO 03064407	A	07-08-2003	WO 03064407 A2	07-08-2003
WO 03063847	A	07-08-2003	GB 2384707 A	06-08-2003
			WO 03063847 A1	07-08-2003